From conflict to coexistence between humans and elephants: A Story from Anamalai- Technology News, Firstpost

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Losing their natural habitats, functional corridors, and the resulting reduction in the availability of resources, are pushing species like elephants to adapt to changing environments.

This adaptation in species like the elephant, which are 'habitat generalists' capable of surviving on a wide variety of landscapes and palates, is causing them to wander into areas of human use. Incidents in which elephants enter anthropogenic landscapes can sometimes result in a human-elephant conflict, which poses a serious management concern to government agencies engaged in wildlife conservation, and researchers attempting to identify sustainable solutions.

A holistic approach to resolve human-elephant conflict

Many interventions towards mitigating conflict from these interactions have failed, a key reason being the replication of techniques across landscapes, instead of having site-specific approaches. With examples of successful conflict management practices arising from few landscapes, it is time we look at the issue more holistically, and prioritise scientific understanding of the issue, before attempting to resolve it.

An important element in any such resolution is understanding the behavioural ecology of the species, with an emphasis on its distribution, patterns of movement over time, and seasonality of dietary habits in these contexts. The research carried out by my team and I in the Anamalai region in Tamil Nadu and Hassan region in Karnataka has attempted to assimilate location-specific facets of the problem, with a keen eye on the biological study of the species.
Adapting to the new normal

About a month ago, I was informed of the presence of two elephants near a residential colony not far from where we lived, in the hill town of Valparai in the Anamalai hills. I didn't have a second thought as to who they were – Pigtail, one of the older females in our study, and her son, a juvenile. They have made it part of their normal ranging behaviour to move close to habitations, subsisting on the plantain and grass in their backyards, and resting in the nearest forest fragments, occasionally feeding from vayals, or fields, amidst tea plantations in the area.

Hardly a threat to people around them, these elephants, like many others that roam these landscape extensively, have seemingly adapted to the anthropogenic changes on the plateau. Elephants have been ranging on the plateau even before the vast swathes of tea came up in the late 1880s, as CRT Congreve, a British Officer who surveyed the landscape, testifies in his book *The Anamalais*.

The positive attitude of residents

What I witnessed there on arriving at the location was delightful; people enjoying the sight of these two elephants relishing ripe jackfruits from the backyard of a house, neither the elephants nor the spectators disturbing each other. While the landscape in the past decade has witnessed significant human-elephant interactions where elephants have caused property damage and human deaths through accidental encounters, people still have a positive attitude towards the species.

To a greater extent, this has been a result of researchers/conservationists and the forest department engaging with the local stakeholders on a regular basis, and the interventions made towards mitigating
the larger problem. Today, people recognise the elephants individually, acknowledge their presence, and continue their daily routine, staying out of harm’s way.

Individual identification by the populace is often associated with problem animals across most parts of the country. For instance, Osama of Sonitpur, Assam, and Kolakolli of Peppara, Thiruvananthapuram, were proclaimed to be “rogues” and both eventually met tragic ends. Valparai, on the contrary, serves as an example where elephants are revered by the local communities, and Monica, among them, tops the lot. Monica is one of the most docile, well-adapted elephants I have ever seen, spending most of her time in human-use areas, feeding from backyards, causing no harm.

The role of behavioural ecology in human-elephant conflict

Ever since I started studying elephants in the landscape, Monica, with her intriguing personality, had prompted me to ask more questions in behavioural ecology. She often made my team and me think and reevaluate several existing theories and observations on elephant sociality. Though I’ve always been interested in elephant behaviour, it was only after I joined Dr Anindya Sinha and Dr Anand Kumar for my research that the answers offered in behavioural ecology to understanding conservation conundrums, such as human-wildlife conflict came into view.

Anand’s understanding of the elephants’ ranging patterns in the landscape over time helped set up a successful conflict mitigation model in the Anamalai hills, with early warning systems in place. The initiative over the years has brought down human casualties and fatalities due to elephants by about two-thirds, while property damage caused by elephants has reduced by more than half.
It was this understanding that conflict, as an issue, needs to be redressed by focussing on problematic locations and not the so-called 'problem animals', which aided in the sustenance of the system over the years. It is this replicable model that has now been expanded to other areas where conflict has been claiming both elephant and human lives, places where most mitigation measures have failed for some reason or the other.

The take-home message of such successful interventions, however, is not in the replication of such model systems, but emphasising on understanding the problem in areas, both in terms of the socioeconomic aspects and in terms of the biology of the species involved.

**Scientific and successful interventions pave the road ahead**

In the Hassan-Kodagu regions of Karnataka, our team is currently trying to understand the various facets of human-elephant interactions. With a preliminary understanding of their patterns of movement over time, some early warning initiatives have been introduced, with a hope that the landscape, that has witnessed the large-scale removal of elephants for conflict mitigation could change into a model system.

Vinod Krishnan, a fellow researcher studying elephants in the landscape testifies that removal of animals involved in past conflicts has only contributed to further influx, inflaming the situation further. His field experiences in the landscape over the past three years shows how individual elephants, earlier thought to be problem animals, hardly cause any damage. In several instances, Drona, one of the large males in the landscape that Vinod studies, is seen grazing along habitations, along roads, on village trails, and other places frequented by people, never posing a threat to the public.

Throughout their life, Monica, and other individuals living in human-use landscapes, contrary to wide perception about them, try and coexist with humans, with minimal damage, and provide the answer for the frequently asked question of whether coexistence between an 80-kilogram-human and a 5-ton-animal is a possibility, with no artificial barriers between them.

It is often easy to stamp an animal as a problem individual, as is often seen in the larger context of human-elephant conflict, and it is scientific interventions in such context that help us understand how perceptions could often go wrong.

The author is a researcher at the Nature Conservation Foundation, and doctoral student at the National Institute of Advanced Studies, Bangalore, working to understand elephant behaviour in human-modified, conflict-prone regions in the Western Ghats. Sreedhar investigates the behavioural and physiological responses in Asian elephants in human-dominated landscapes as part of the Foundation’s Annamalai Elephant Programme.